

REMARKS

Reconsideration and withdrawal of the rejections set forth in the above-mentioned Official Action in view of the foregoing amendments and the following remarks are respectfully requested.

Claims 4-7 and 15-18 are now pending in the application, with Claims 4, 7, 15 and 18 being independent. Claims 4, 5, 7, 15, 16, and 18 have been amended herein. Claims 1, 8-12 and 19-22 have been cancelled without prejudice or disclaimer.

Claims 1, 7-9, 12 and 18-20 were rejected under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 6,575,549 (Silverbrook). Claims 7 and 18 were rejected under § 102 as being anticipated by U.S. Patent No. 6,481,816 (Oyen). Claims 10 and 21 were rejected under 35 U.S.C. §103(a) as being unpatentable over Silverbrook in view of U.S. Patent No.5,929,875 (Su). Claims 11 and 22 were rejected under § 103 over Silverbrook in view of Oyen. Claims 4-6 and 15-17 were rejected under §103 as being unpatentable over Oyen in view of U.S. Patent No. 6,278,469 (Bland). These rejections are respectfully traversed.

Independent Claims 7 and 18 each recite, *inter alia*, that when printing data corresponding to the N-th abnormal nozzle is added to that corresponding to the (N-M)-th neighboring nozzle in the (N+M)-th neighboring nozzle, the driving frequency for rejecting ink from the (N-M)-th neighboring nozzle and the (N+M)-th neighboring nozzle is increased. Such a feature is described in Applicants' Figures 13A and 13B, for example.

However, such features are not believed to be disclosed or suggested by Silverbrook or Oyen.

For example, Silverbrook describes a method for compensating for device failure by shifting ink dots sideways or lengthways to adjacent rows or columns. However, referring to Figure 3 of Silverbrook, the number rows of ink ejections does not change from that of Figure 2 for a predetermined area. Therefore, the driving frequency does not change. Compared to Figures 13A and 13B of the present invention (which are rotated 90 degrees as compared to Figure 3 of Silverbrook), the number of columns increases from Figure 13A to Figure 13B so as to increase the driving frequency in the horizontal direction.

As to Oyen, in the event of a breakdown of an image-forming element, the information of that pixel is transferred to an addressable position in the vicinity of an associated pixel. However, Oyen does not show that the driving frequency for neighboring nozzles is increased.

Accordingly, Silverbrook and Oyen fail to disclose or suggest important features of the present invention recited in independent Claims 7 and 18. Reconsideration and withdrawal of the § 102 rejections are respectfully requested.

Regarding Claims 4 and 15, Oyen does not disclose or suggest adding printing data corresponding to an abnormal nozzle malfunctioning in ink-ejection to printing data corresponding to a neighboring nozzle, based on a landing state of ink ejected

from a neighboring nozzle. Oyen, therefore, fails to disclose or suggest important features of the present invention recited in the independent Claims 4 and 15.

In Bland et al., the ink jet printer and method can test ink drop output of print head nozzles and define a print mask that enables deposition of more ink from higher quality nozzles and less ink from lower quality nozzles. However, Applicants submit that Bland et al. does not disclose determining the higher quality nozzles to be used for compensating based on a landing state of the higher quality nozzles. Therefore, Bland et al. also cannot disclose adding printing data corresponding to the abnormal nozzle to a neighboring nozzle, based on the landing state of ink ejected from the neighboring nozzle.

Moreover, in Bland et al., Applicants submit that the image is completely printed in a predetermined area of the medium by a plurality of scanning operations of the printing head. In such multi-pass printing, the higher quality nozzles are used to compensate for the malfunctioning nozzles. Therefore, it is necessary to change mask patterns to be used in the plurality of scanning operations, and data processing cannot be effected easily. Therefore, Bland et al. is not used in a system in which the image is completely printed by a single movement of the printing head, as is recited in independent Claims 4 and 15. Accordingly, not only does Bland et al. fail to remedy certain deficiencies of Oyen noted above with respect to Claims 4 and 15, but one of ordinary skill in the art would not look to Bland et al. to modify Oyen because it uses multi-pass printing.

The remaining citations have been reviewed, but are not believed to be any more relevant than the citations noted above. Accordingly, independent Claims 4 and 15

are also patentable over the citations of record and reconsideration and withdrawal of the § 103 rejections are also requested.

For the foregoing reasons, Applicants respectfully submit that independent Claims 4, 7, 15 and 18 are patentable. Dependent Claims 5, 6, 16, and 17 are also allowable, in their own right, for defining features of the present invention in addition to those recited in their respective independent claims. Individual consideration of the dependent claims is requested.

Applicants submit that the present application is in condition for allowance. Favorable reconsideration, withdrawal of the rejections set forth in the above-noted Office Action, and an early Notice of Allowability are requested.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

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